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**CIA-RDP86-00513R001757420003-2**

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are more sensitive than wavenumber stretching modes. In  
the case of polar and non-polar molecules the lines of the  
polar component are more intense.

*TOHOB, T.P.*

LAZAREV, A.N.; TULUB, T.P.; BOBOVICH, Ya.S.

Raman spectra of certain alkoypolysiloxanes. Opt. i spektr. 4  
no.3:417-418 Mr '58. (MIRA 11:4)

1. Gosudarstvennyy opticheskiy institut im. S.I. Vavilova i Institut  
khimii silikatov AN SSSR.  
(Siloxanes--Spectra)

AUTHORS: Lazarev, A.N., Tulub, T.P. and Bobovich, Ya.S. 51-4-3-28/30  
 TITLE: Raman Scattering Spectra of Certain Alkoxypolysiloxanes  
 (O spektrakh kombinatsionnogo rasseyaniya nekotorykh  
 alkoksipolisiloksanov.)

PERIODICAL: Optika i Spektroskopiya, 1958, Vol.IV, Nr.3,  
 pp. 417-418 (USSR)

ABSTRACT: Study of the structure of products of hydrolytic  
 condensation of esters of orthosilicic acid  
 (alkoxypolysiloxanes) is of great interest because  
 of many technical applications of silico-organic com-  
 pounds. Such studies may be also useful in eluci-  
 dation of the spectra of silicates. The authors  
 obtained photographically and photoelectrically Raman  
 scattering spectra for the following compounds:  
 $\text{Si}(\text{OCH}_3)_4$ ,  $(\text{CH}_3\text{O})_3\text{SiOSi}(\text{OCH}_3)_3$ ,  $\text{Si}(\text{OC}_2\text{H}_5)_4$ ,  
 $(\text{C}_2\text{H}_5\text{O})_3\text{SiOSi}(\text{OC}_2\text{H}_5)_3$ ,  $(\text{C}_2\text{H}_5\text{O})_3\text{SiOSi}(\text{OC}_2\text{H}_5)_2\text{OSi}(\text{OC}_2\text{H}_5)_3$ .  
 The measured values of frequencies in  $\text{cm}^{-1}$ , of the  
 relative intensities and the degree of depolarization  
 of lines are given in the table on p.417. To measure  
 the intensities and the degree of depolarization of  
 lines the photoelectric apparatus described in Ref.1

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Raman Scattering Spectra of Certain Alkoxypolysiloxanes 51-4-3-28/30

was used. The figure on p.413 gives, by way of example, the polarized spectra of tetramethoxysilane (curves a) and hexamethoxydisiloxane (curves b). A preliminary brief discussion of the results obtained is given. There are 1 table, 1 figure and 4 references of which 2 are Soviet, 1 French and 1 Swiss.

ASSOCIATION: State Optics Institute imeni S.I. Vavilov;  
Institute for Silicate Chemistry, Academy of Sciences  
of the USSR  
(Gosudarstvennyy opticheskiy institut im. S.I.  
Vavilova, Institut khimii silikatov AN SSSR.)

SUBMITTED: July 15, 1957.

1. Orthosilicic acid--Esters 2. Esters--Hydrolytic con-  
densation 3. Alkoxypolysiloxanes--Scattering 4. Raman  
spectra--Applications

Card 2/2

BOBOVICH, Ya.S.; TULUB, T.P.

Influence of intermolecular forces in solutions on the intensity of  
Raman lines. Zhur.eksp.i teor. fiz. 30 no.1:189-190 Ja '56.  
(Raman effect) (Molecular association) (MLRA 9:7)

BOBOVICH, Ya.S., GIRIN, O.P., TULUB, T.P.

A possible interpretation of the vibration spectra of simple silicate glasses. Dokl. AN SSSR 105 no.1:61-64 N '55. (MLRA 9:3)

1. Predstavleno akademikom A.N. Tereninym.  
(Glass--Spectra)



L 25713-66 EWT(1)/EWT(m)/ENP(a) WU  
ACC NR: AP60C2800

SOURCE CODE: UR/0237/60/000/002/0009/0017

AUTHOR: Bobovich, Ya. S.; Tulub, T. P.

ORG: none

TITLE: Combination scattering as a method for the study of the structure of inorganic glasses

SOURCE: Optiko-mekhanicheskaya promyshlennost', no. 2, 1960, 9-17

TOPIC TAGS: IR spectroscopy, combination scattering, chemical bonding, silicate glass, molecular structure

ABSTRACT: Using a number of examples, the authors attempt to prove the possibilities and characteristics of the method of combination scattering, particularly in the case of silicate systems. A detailed report on the factual material used in this attempt was published by the authors in an earlier paper (UFN, 66, 1958, p. 3). In order to study the oscillating movements of the atoms of a molecule, the authors constructed a N system, using small balls connected by springs with each other. The balls represent atoms and the springs, elastic forces which act between the atoms. The system N could accomplish 3N-6 independent oscillations. Not all these oscillations show up in the spectra of combination scattering. In order for an oscillation to become active in scattering, it must be accompanied by changes in the polarizability of a

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L 25717-66

ACC NR: AP6002800

single bond or the entire molecule. In the case of the infra-red spectroscopy method, another value is valid: a change in the dipole moment of the molecule during the oscillation of its atoms. Based on these facts, the authors claim that the scattering intensity characterizes definitely the type of bond. This is true in the case of oscillations of diatomic molecules and individual bonds in polyatomic molecules. The authors conclude that data on the relative intensity of combination scattering bonds is supported by the Pauling electronegative scale. It is possible to assume that further precision measurements of intensity will provide an answer to this important and difficult problem. Orig. art. has: 10 figures.

SUB CODE: 07 / SUM DATE: 22Sep59/ ORIG REF: 017/ OTH REF: 014

Card 2/2

NEMCHENKO, A.M.; TULUBOVSKAYA, Ye.Ya.

Carrying out large-scale rat extermination with Isachenko's  
bacterial culture. Zdrav.Belor. 3 no.10:54-55 0 '57.

(MIRA 13:6)

1. Iz Grodnenskoj oblastnoy sanitarno-epidemiologicheskoy  
stantsii (glavnyy vrach V.A. Aleksandrovich).  
(GRODNO--RATS--EXTERMINATION)

TULEKIDZE, P.

Light concretes with natural aggregates, and their application in bridge construction and civil and hydraulic engineering. p.173

HIDROTEHNICA. (Asociatia Stintifica a Inginerilor si Tehnicienilor din Romina) Bucuresti, Romania Vol. 4, no.6, June 1959

Monthly List of East European Accessions (EEAI) LC, Vol. 9, no. 2, Feb. 1960

Uncl.

KUZNETSOV, Yevgeniy Semenovich: Prinimali uchastiye: RYTCHENKO, V.I.;  
ORLOV, V.P.; RUBETS, D.A.; ZAYATS, T.P.; KUROPTEV, V.T.;  
LEYDEEMAN, S.R.; NOSOV, L.I.; SOKOLOV, O.V.; TULUKOV, G.A.;  
SHIBIN, P.V. LESHYAKOV, F.I., red.; DONSKAYA, G.D., tekhn.red.

[Efficient systems of maintenance and methods for their correction]  
Ratsional'nye rezhimy tekhnicheskogo obsluzhivaniia i metodika ikh  
korrektirovaniia. Moskva, Avtotransizdat. Pt.2. [Second stage of  
motor vehicle maintenance] Vtoroe tekhnicheskoe obsluzhivanie.  
1960. 98 p. (MIRA 14:3)  
(Motor vehicles--Maintenance and repair)

TULUKOVA, K. I., SVESHNIKOVA, N. P., KOKOVIN, I. L., SAKHARTSEVA, T. F.,  
TERSNIKH, V. I.

"Leptospirosis foci on filtration fields." p. 163

Desyatoye Soveshchaniye po parazitologicheskim problemam i  
prirodnoochagovym boleznyam. 22-29 Oktyabrya 1959 g. (Tenth Conference  
on Parasitological Problems and Diseases with Natural Foci 22-29  
October 1959), Moscow-Leningrad, 1959, Academy of Medical Sciences  
USSR and Academy of Sciences USSR, No. 1 254pp.

Inst. of Epidemiology and Microbiology, AMS USSR/ Moscow

and the Moscow Oblast Sanitary-Epidemiological Station

TULUKOVA, K.I.  
TERSKIEH, V.I.; TULUKOVA, K.I.; SVESHNIKOVA, N.P.

Field mice as carriers of the causative agent of leptospirosis  
type II (moniskov) in the vicinity of rivers and flood lands.  
Zhur.mikrobiol.epid. i immun. 28 no.4:115-118 Ap '57. (MIRA 10:10)

1. Iz Instituta epidemiologii i mikrobiologii imeni Gumelel AMN  
SSSR i Moskovskoy oblastnoy protivotulyaremnoy stantsii.  
(LEPTOSPIROSIS, transmission  
by field mice in vicinity of rivers, control)

TULUKOVA, K. I.  
Acad Med Sci USSR.

TULUKOVA, K. I.- "A comparative study of experimentally obtained alkali-producers and *B. faecalis alcaligenes*." Acad Med Sci USSR. Moscow, 1955.  
(Dissertation for the Degree of Candidate in Medical Sciences)

SO: Knizhnaya Letopis' No. 20, 1956



TULUKOVA, K. I.

USSR /Microbiology. General Microbiology.

F-1

Abs Jour: Referat.Zh.-Biol., No. 9, 1957, 35486

Author : Tulukova, K.I.

Title : A Comparative Study of Experimentally Obtained Alkaline-formers and B. faecalis alcaligenes.

Orig Pub: V sb.: Izmenchivost organismov. M., Medgiz, 1956, 104-112

Abstract: The properties were studied of 21 strains of experimentally obtained alkaline-formers and from 102 strains alkaline-formers which had been isolated from organisms which had been sick with chronic dysentery (99 strains) and from standard strains (3 strains). Attempts to isolate cultures of alkaline-formers in healthy children who did not have a history of intestinal diseases

Card 1/2

USSR /Microbiology. General Microbiology.

F-1

Abs Jour: Referat.Zh.-Biol., No. 9, 1957, 35486

were unsuccessful. Morphological and culture-biochemical differences in both groups of alkaline-formers were not noted. Both, the experimentally obtained and the isolated alkaliformers had a low virulence; however, the virulence of the latter is a little higher. The antigen properties of all the strains of both groups studied were well expressed; the group of experimentally obtained alkaline-formers in its antigen properties were uniform. In the 21 strains of isolated alkaline-bearers was shown the community of the antigen groupings with the experimentally obtained, and also the presence of specific groupings. The author proposes that faecal alkaline-formers could be formed from intestinal bacilli and pathogenic intestinal bacteria.

Card 2/2

PULUMDZHIAN, A.O.; DZIDZARIYA, G.A., redaktor; KHAKHMIGERI, M.D.,  
tekhnicheskiiy redaktor

[Abkhazian Economic Council; catalog of its collection] Ekoso  
Abkhazii; opisanie fonda. Sukhumi, Abkhazskoe gos.izd-vo, 1956.  
29 p. (MLRA 10:9)

1. Abkhazskiy Ekonomicheskiiy Sovet  
(Abkhazia--Economic policy)

1. TULUNIN, B.

2. USSR (600)

4. Grain

7. High yields of grain from the whole seeded area, Kolkh. proizv. 13  
No. 2, 1953

9. Monthly List of Russian Accessions, Library of Congress, May 1953. Unclassified.

*TULUNIN, B.N.*  
MININ, Dionisiy Danilovich; TULUNIN, B.N., red.; ZUBRILINA, Z.P., tekhn.red.

[Gathering and storing tree and shrubbery seeds] Sbor i khranenie  
semyan drevesnykh i kustarnikovykh porod. Izd. 3-e, ispr. i dop.  
Moskva, Gos. izd-vo sel'khoz. lit-ry, 1957. 103 p. (MIRA 11:2)  
(Seeds)

TULUNIN, Boleslav Nikolayevich; DMITRIYEVA, L.A., red.; YELAGIN, A.S.,  
tekhn. red.

[The A B C of feed units] Azbuka kormovykh edinit. Moskva, Sovetskaya Rossiya, 1962. 124 p. (MIRA 15:12)  
(Feeds)

BRAGINA, Frida Grigor'yevna; NIKITIN, P.D.; SAVCHENKO-BEL'SKIY, A.A.;  
ROZHKOVA, T.D., redaktor; TULUNIN, B.N., redaktor; BALLOD, A.I.,  
tekhnicheskiiy redaktor

[Growing shelterbelts; techniques and work organization] Vyrashchiva-  
nie polezashchitnykh lesnykh polos; tekhnika i organizatsiia rabot.  
Moskva, Gos. izd-vo sel'khoz.lit-ry, 1957. 132 p. (MLRA 10:8)  
(Windbreaks, shelterbelts, etc.)

ACC NR: AT6022359

SOURCE CODE: UR/0000/66/000/000/0069/0076

AUTHOR: Gorokhov, V. A.; Koshelyayev, G. V.; Tulunkin, G. P.

ORG: none

TITLE: Photosensitive semiconductor capacitors (photovaricaps)

SOURCE: Vsesoyuznaya nauchnaya sessiya, posvyashchennaya Dnyu radio. 22d, 1966.  
Sektziya poluprovodnikovyykh priborov. Doklady. Moscow, 1966, 69-76

TOPIC TAGS: photosensitivity, electronically variable capacitor, varicap,

*Semiconductor device*  
ABSTRACT: Several uses of semiconductor photosensitive capacitors, photovaricaps, for amplification of weak photocurrents are given. The use of photovaricaps in a circuit that indicates shifts of weak light rays and a switching circuit triggered by light is also given. Two types of photoamplifiers are discussed; in both of them temperature changes of the photovaricap capacitance are eliminated by interrupting the light beam that is amplified. The first type has a low interruption frequency (20 cps); it uses FDK-1 photovaricaps made from gallium arsenide and is capable of amplifying photocurrents of  $5 \times 10^{-12}$  a with a good signal-to-noise ratio. The second type has a high interruption frequency (2 kc); it also uses FDK-1 photovaricaps and is capable of amplifying photocurrents of  $2 \times 10^{-11}$  A with a signal-to-noise ratio of 10. The operating thresholds for either state (on and off) of the light-triggered switching circuit are equal to  $0.4 \times 10^{-3}$  lm; the circuit uses FDK-1 photovaricaps, and germanium and

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ACC NR: AT6022359

silicon photodiodes. Orig. art. has: 5 figures.

SUB CODE: 09/ SUBM DATE: 05Apr66/ ORIG REF: 006/ OTH REF: 004

Card 2/2

L 15485-63

EWB(j)/EPA(c)/EWT(m)/BDS Pc-4/Pr-4 DE/RH/WW

ACCESSION NR: AP3005446

S/0204/63/003/004/0494/0497

AUTHORS: Shuykin, N. I.; Tulunova, Ye. D.; Ostapenko, E. G.

TITLE: Separation of methylcyclopentadiene from the products of catalytic dehydration\* of methylcyclopentene

SOURCE: Neftekhimiya, v. 3, no. 4, 1963, 494-497

TOPIC TAGS: methylcyclopentadiene separation, methylcyclopentene dehydration, methylcyclopentene, methylcyclopentadiene, methylchlorocyclopentane, metallic sodium, adsorption chromatography

ABSTRACT: Authors attempted to find a new way of synthesizing methylcyclopentadiene and separating it from a mixture of other hydrocarbons. The synthesis of methylcyclopentadiene was carried out through a stepwise chlorination of methylcyclopentane fraction and a catalytic dehydrochlorination of the formed methylchlorocyclopentanes to methylcyclopentenes which are dehydrated to methylcyclopentadiene in the presence of catalytic oxides. Two methods of separation of methylcyclopentadiene from the hydrocarbon mixtures were developed: one

\*[NOTE: wherever appearing, "dehydration" should read  
Card 1/2 dehydrogenation]

L 15485-63

ACCESSION NR: AP3005446

consists in the reaction of the catalyzed mixture with metallic sodium, forming sodium methylcyclopentadienyl which is decomposed in water. The yield of methylcyclopentadiene is 91-92% with a purity of 94-96%. The impurity in the above product is cyclopentadiene. The second method of separation consists in the dimerization of the catalyzed mixture at 68C and atmospheric pressure for a period of 14 hours. The yield of the dimer is 97%. Depolymerization takes place by gradually heating it from 175 to 260C. The yield obtained by this method is 99% of methylcyclopentadiene with a purity of 92%. The quantitative determination of methylcyclopentadiene found in the catalytic dehydration of methylcyclopentene mixtures is made by adsorption chromatography. Orig. art. has: 1 formula and 2 tables.

ASSOCIATION: Institut organicheskoy khimii AN SSSR im. N. D. Zelinskogo (Institute of organic chemistry, AN SSSR)

SUBMITTED: 27Mar63	DATE ACQ: 06Sep63	ENCL: 00
SUB CODE: CH	NO REF SOV: 006	OTHER: 015

Card 2/2

TULUPIY, G.G. [Tulupii, H.H.]

Turkish hazel in the "Sofiiivka" Arboretum. Trudy Bot. sada AN  
URSR 7:129-131 '60. (MIRA 14:4)

(Hazel)

KRIVUL'KO, Densi Stepanovich[Kryvul'ko, D.S.]; REVA, Mikhail  
Lukich; TULUPYY, Grigoriy Grigor'yevich [Tulupii, H.H.];  
KONDRATYUK, Ye.M., kand. biol. nauk, otv. red.; KOVAL', V.A.,  
red. izd-va; KADASHEVICH, O.A., [Kadashevych, O.A.], tekhn.  
red.

["Sofievka" Arboretum] Dendrologichnyi park "Sofiivka." Kyiv,  
Vyd-vo Akad. nauk URSR, 1962. 81 p. (MIRA 15:7)  
(Uman'---Arboretums)

FEDORENKO, N.; TULUPNIKOV, A.

Economic efficiency of the chemicalization of stockbreeding.  
Vop. ekon. no. 1:66-73 Ja '64. (MIRA 17:3)

1. Chlen-korrespondent AN SSSR (for Fedorenko). 2. Chlen-korrespondent Vsesoyuznoy akademii sel'skokhozyaystvennykh nauk im. Lenina (for Tulupnikov).

GORDEYEV, G.S., prof.; YAKUSHKIN, D.I.. Prinimali uchastiye: GORSKAYA, N.V.; GRANOVSKAYA, A.Ye.; YEVSTIGNE'VA, Yu.G.; KRYLOV, M.V.; LEYKIN, D.I.; MAKHOVETSKIY, V.B.; MEYENDORF, A.L.; HAZARENKO, V.I.; NICHIPORUK, O.K.; PAVLOV, L.I.; RUMYANTSEVA, N.V.; SOSENSKIY, I.I.; CHERNEVSKIY, Yu.V.. TULUPNIKOV, A.I., red.; SOLOV'YEV, A.V., prof., red.; RAKITINA, Ye.D., red.; ZUBRILINA, Z.P., tekhn.red.

[Agriculture in capitalist countries; a statistical manual] Sel'skoe khoziaistvo kapitalisticheskikh stran; statisticheskiy sbornik. Moskva, Gos.izd-vo sel'khoz.lit-ry, 1958. 247 p. (MIRA 12:5)

1. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut ekonomiki sel'skogo khozyaystva. 2. Otdel nauchnoy informatsii po ekonomike i organizatsii sel'skogo khozyaystva zarubezhnykh stran Vsesoyuznogo nauchno-issledovatel'skogo instituta ekonomiki sel'skogo khozyaystva (for all except Tulupnikov, Solov'yev, Rakitina, Zubrilina). 3. Direktor Vsesoyuznogo nauchno-issledovatel'skogo instituta ekonomiki sel'skogo khozyaystva (for Tulupnikov). 4. Zamestitel' direktora Vsesoyuznogo nauchno-issledovatel'skogo instituta ekonomiki sel'skogo khozyaystva (for Solov'yev).

(Agriculture--Statistics)

TULUPNIKOV, A.I.

On the question of the evaluation of soils. Vop.geog. no.43:  
7-9 '58. (MIRA 12:5)

(Soil research)



TULUPNIKOV, A.: BATOVA, N.

"Principles and methods of preparing scientifically tested agricultural systems  
based on zones"

Sbornik. Rada Zemedelska Ekonomika. Praha, Czechoslovakia. Vol. 32, no. 1, Jan 1959

Monthly list of East European Accessions (EEAI), LC, Vol. 8, No. 6, Jun 59, Unclass

TULUPNIKOV, A.I.. Prinsipali uchastnye: BAKULIN, I.I.; VIKHLYAYEV, A.P.;  
DUBOROV, M.T.; KABANOV, P.N.; PIS'MENNYI, I.G.; POPOV, M.I..  
SOLOV'YEV, A.V., prof., doktor ekon.nauk, retsenzent; MAKAROV, M.P.,  
prof., doktor ekon.nauk, retsenzent; GORYACHKIN, M.I., kand.nauk,  
retsenzent; OKHAPKIN, K.A., kand.nauk, retsenzent; RUSAKOV, G.K.,  
kand.nauk, retsenzent; MURATOV, D.G., kand.nauk, retsenzent; CHERE-  
MUSHKIN, S.D., kand.nauk, retsenzent; TOLOV, V.V., retsenzent.

[Economic basis for agricultural administration] Voprosy ekonomicheskogo obosnovaniia sistem vedeniia sel'skogo khoziaistva. Moskva, 1960. 275 p. (MIRA 13:6)

1. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut ekonomiki sel'skogo khozyaystva. 2. Vsesoyuznyy nauchno-issledovatel'skiy institut ekonomiki sel'skogo khozyaystva (for Bakulin, Vikhlyayev, Duborov, Kabanov, Pis'menny, Popov.)  
(Farm management)

TULIPNIKOV, A. I.

"The Rational Organization of Agricultural Enterprises in the USSR."

report presented at BCE Ad Hoc Meeting of Experts on Farm Rationalization,  
Geneva, October 20, 1961.

DUPAL, Yaroslav [Dupal, Jaroslav]; GAVLICHEK, Yaromir [Havlicek, Jaromir]; STOCHES, Ferdinand [Stoces, Ferdinand]; BARTUNEK, Iosif [Bartunek, Josef]; LEVITMAN, Ye.A. [translator]; TULUPNIKOV, A.I., red.; SUMNIK, Z.A., red.; IL'YUSHENKOVA, T.P., tekhn. red.

[Problems in determining the effectiveness of agricultural production in Czechoslovakia] Voprosy opredeleniia effektivnosti sel'skokhoziaistvennogo proizvodstva v Chekhoslovakii. Pod red. A.I. Tulupnikova. Moskva, Gosstatizdat, 1962. 178 p. Translated from the Czech. (MIRA 15:11)

1. Nauchno-issledovatel'skiy institut narodnokhozyaystvennogo planirovaniya pri Gosudarstvennoy planovoy komissii, Chekhoslovakiya (for Dupal, Gavlichek). 2. Gosudarstvennaya planovaya komissiya, Chekhoslovakiya (for Bartunek).

(Czechoslovakia--Agriculture--Economic aspects)

TULUPNIKOV, L.A.; SOLOV'YEV, A.V.; BATOVA, N.T.; GAVRILOV, V.I., kand.  
ekonom.nauk; SHIMKO, N.I.; POLOVENKO, I.S., kand.ekonom.nauk;  
POTAPOV, Kh.Ye., red.; OVCHINNIKOV, N.G., red.; PONOMAREVA, A.A.,  
tekhn.red.

[Problems pertaining to long-range planning and systems of  
management on collective and state farms] Voprosy perspektivnogo  
planirovaniia i sistemy vedeniia khoziaistva v kolkhozakh i sovkho-  
zakh. Moskva, Gosplanizdat, 1960. 681 p.

(MIRA 14:3)

1. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut ekonomiki  
sel'skogo khozyaystva. 2. Chlen-korrespondent Vsesoyuznoy akademii  
sel'skokhozyaystvennykh nauk imeni V.I.Lenina; direktor Vsesoyuznogo  
nauchno-issledovatel'skogo instituta ekonomiki sel'skogo khozyaystva  
(for Tulupnikov). 3. Zamestitel' direktora Vsesoyuznogo nauchno-  
issledovatel'skogo instituta ekonomiki sel'skogo khozyaystva (for  
Gavrilov). 4. Rukovoditel' otdela Vsesoyuznogo nauchno-issledovatel'-  
skogo instituta ekonomiki sel'skogo khozyaystva (for Polovenko).  
(Collective farms) (State farms)

MAYEVSKIY, V. (Rostovskaya oblast', g.Krasnyy Sulin); STONIS, V. (Komi  
ASSR, Vorkuta); TULUFOV, A. (Ryazanskaya oblast', Yekshurskaya  
shkola); PLAVIL'SHCHIKOV, N.N., prof., doktor biologicheskikh nauk

Herald of a young naturalist. IUn. nat. no.12:24-25 D '61.

(Birds--Behavior) (Ants)

(MIRA 15:1)

TULUPOV, A.A.

AUTHOR: Tulupov, A.A. and Tsuy Fun, Engineers.

130-8-12/20

TITLE: Manipulating Rolls for Continuous-billet Mills (Kantuyush-chiye valki dlya nepreryvno-zagotovochnykh stanov)

PERIODICAL: Metallurg, 1957, No.8, pp. 30 - 32 (USSR).

ABSTRACT: The authors state that serious difficulties arose at the An'shan (China) Metallurgical Combine when an attempt was made to use on the 600 continuous-billet mill the design of rollers for rotating the work successfully applied at the Magnitogorsk Metallurgical Combine (Magnitogorskiy Metallurgicheskiy Kombinat). They attribute this failure to the fact that on the Chinese mill there was insufficient room to place the manipulating rolls behind the stand. They describe the solution of the difficulty by using hollow rolls rotating about cylinders welded to the housing of the stand. The bronze bearings first used in the hollow rolls failed rapidly and were replaced by fabric ("textolite") ones, developed by An'shan personnel, together with Engineers A.A. Tulupov and B.V. Merekin. Details of the rolls and bearings and the cooling/lubricating systems adopted are given by the authors together with data on durabilities of the passes, bearings and supporting cylinders for angles of rotation of  $19^{\circ}31'$  and work sections of 250 x 183 and 216 x 132 mm. There are 3 figures.

Card 1/2

Manipulating Rolls for Continuous-billet Mills.

130-8-12/20

ASSOCIATION: Magnitogorsk Metallurgical Combine (Magnitogorskiy Metallurgicheskiy Kombinat) and An'shan Metallurgical Combine (An'shan Metallurgicheskiy Kombinat KNR)

AVAILABLE: Library of Congress.

Card 2/2



TULUPOV, A.A., inzhener; TSUY FUN' [Ts'ui Fun], inzhener.

Beveling rolls for continuous billet rolling mills. *Metallurg* 2  
no.8:30-32 Ag '57. (MLRA 10:9)

1. Magnitogorskiy metallurgicheskiy kombinat (for Tulupov).
2. An'shan'skiy metallurgicheskiy kombinat, Kitaystaya Narodnaya  
Respublika (for Ts'ui Fun).  
(Rolls (Iron mills))

TULUPOV, A.M., red.; TERTYSHNIK, G.A., red.; YASHEN'KINA, Ye.A.,  
tekhn.red.

[Sunflower, a valuable industrial crop] Podsolnechnik -  
tsennaya tekhnicheskaya kul'tura. Kuibyshev, Kuibyshevskoe  
knizhnoe izd-vo, 1961. 41 p. (MIRA 14:1)  
(Sunflowers)

43379

S/056/62/043/005/044/058  
B125/B104

24.6300

AUTHORS: Lazareva, L. Ye., Tulupov, B. A.

TITLE: On a method of investigating the optical anisotropy and the shape of the surface of atomic nuclei

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 47, no. 5(11), 1962, 1910-1913

TEXT: The method proposed is based on finding the direction  $\vec{n}$  from which charged subbarrier particles are emitted from a nucleus after a photo-nuclear reaction.  $\vec{n}$  is the unit vector of the major axis of deformation of the nucleus. In the photodisintegration of deformed nuclei there are two groups of transitions: The one group is associated with the direction  $\vec{n}$  ( $\omega \approx \omega_0$ ). The second group of transitions ( $\omega \approx \omega_1$ ) refers to the two other axes perpendicular to  $\vec{n}$ . In the first group of transitions the amplitude  $F(\vec{p}, \vec{n})$  of departure of a charged subbarrier particle ( $\vec{p}$  is the wave vector of the departing particle) in the coordinate system linked to the residual nucleus has sharp maxima at the angles  $0^\circ$  and  $180^\circ$ . The departing particles in the lab system have the angular distribution  $d\sigma/d\Omega \sim \sin^2 \vartheta + \Delta(1)$

Card 1/3

On a method of investigating...

S/056/62/043/005/044/058  
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if  $\Delta E/E \ll 1$ , if the rotational level of a product nucleus is not fixed, if the photons are not polarized, and if the nuclei are not oriented.  $\Delta E$  is the energy of the rotational levels of the residual nuclei,  $E$  is the energy of the departing nuclei,  $\theta$  is the angle between the momenta of the photon and of the departing particle. Estimates of  $\Delta \approx \theta_{1/2}^2$ , where  $\theta_{1/2}$  is the half width of the particle angular distribution in the coordinate system attached to the residual nucleus, resulted in 0.05-0.1. In the frequency range  $\omega \approx \omega_1$ , there is no such general relation as (1). The angular distribution in the region of transitions  $\omega \approx \omega_1$  probably has a relatively flat shape. In this case  $\sigma(0)/\sigma(\pi/2) \approx 1$ . The angular distribution of the subbarrier charged photoparticles in the case of oblate axially deformed nuclei at frequencies of  $\omega \approx \omega_1$  has the general form  $d\sigma/d\Omega \sim 2 + \sin^2\theta + \Delta'$ . In this case  $\Delta' \approx 0.05-0.1$ .  $\omega_{||} < \omega_1$  for oblong nuclei,  $\omega_{||} > \omega_1$  for oblate nuclei. The quadrupole moment can therefore be found from the shape of the angular distribution of the subbarrier charged photoparticles. The laws found here apply not only to photonuclear reactions but also, e.g., to the scattering of high-energy protons through small angles. The basic advantage

Card 2/3

On a method of investigating...

S/056/62/043/005/044/058  
B125/B104

of the present method is that it can be applied to nuclei with any spin including  $I = 0$ . Moreover, it is not necessary to confine oneself to alpha-active particles; one can vary the energy of the charged particles, and one has one more distinguished direction. There is 1 figure.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva Akademii nauk SSSR  
(Physics Institute imeni P. N. Lebedev of the Academy of  
Sciences USSR)

SUBMITTED: June 18, 1962

Card 3/3

LAZAREVA, L.Ye.; TULUPOV, B.A.

A method for studying the optical anisotropy and surface  
forms of atomic nuclei. Zhur. eksp. i teor. fiz. 43  
no.5:1910-1913 N '62. (MIRA 15:12)

1. Fizicheskiy institut imeni P.N. Lebedeva AN SSSR.  
(Photonuclear reactions)

S/903/62/000/000/036/044  
B102/B234

AUTHOR: Tulupov, B. A.

TITLE: Raman scattering of  $\gamma$ -quanta from nuclei

SOURCE: Yadernyye reaktsii pri malykh i srednikh energiyakh; trudy  
Vtoroy Vsesoyuznoy konferentsii, iyul' 1960 g. Ed. by  
A. G. Davydov and others. Moscow, Izd-vo AN SSSR, 1962, 303-309

TEXT: The theory of electric dipole nuclear polarization (Nucl. Phys., 9, 237, 1958) has shown that experiments on elastic photon scattering make it possible to determine scalar and tensor components of nuclear polarization in the case of spins  $> 1/2$ , but since most of the nuclei have the spins 0 or  $1/2$  these experiments are not suitable here. In order to find appropriate experiments a theoretical analysis of the interaction between electro-magnetic field and nucleus was carried out with respect to inelastic photon scattering accompanied by the excitation of rotational levels. The calculations showed that an experimental investigation of Raman scattering of  $\gamma$ -quanta from nuclei with spins  $> 1/2$  is possible to determine the tensor of polarization of any nuclei. The error due to the approximation made in the calculation amounts to 1%.

Raman scattering of...

S/903/62/000/000/038/044  
B\*00/B234

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva AN SSSR (Physics  
Institute imeni P. N. Lebedev AN SSSR)

Card 2/2



TULUPOV, L.P., kand.tekhn.nauk; BUYANOV, V.A., inzh.

Compiling the train dispatching plan on an electronic digital computer.  
Vest. TSNII MPS 22 no.2:55-59.'63. (MIRA 16:4)  
(Railroads—Train dispatching) (Electronic digital computers)

VINOGRADOV, A.N.; LIVSHIN, G.L.; OBRAZTSOVA, R.I.; TULUPOV, L.P.;  
Prinimali uchastiye: RAZORENOVA, L.K., inzh.; DUBINKINA,  
L.I., inzh.; PODGORYKH, A.L., inzh.; LAVRENT'YEV, M.V.,  
retsenzent; MINAKOV, A.D., retsenzent; NESTEROV, Ye.P.,  
retsenzent; STEFANOV, N.Ya., retsenzent; USHAKOV, P.S.,  
retsenzent; KRISHTAL', L.I., red.; KHITROVA, N.A., tekhn.  
red.

[Calculating machines in accounting, planning and administra-  
tion in railroad transportation] Vychislitel'naya tekhnika v  
uchete, planirovanii i upravlenii na zheleznodorozhnom trans-  
porte. [By] A.N.Vinogradov i dr. Moskva, Transzheldorizdat,  
1963. 407 p. (MIRA 17:2)

BUYANOV, V.A., assistant; TULUPOV, L.P., nauchnyy sotrudnik

Concerning the question of the automatic control of train movement.  
Avtom.telem. i sviaz' 4 no.11:7-8 N '60. (MIRA 13:11)

1. Belorusskiy institut inzhenerov zheleznodorozhnogo transporta (for Buyanov). 2. Otdeleniye vychislitel'noy tekhniki Vsesoyuznogo nauchno-issledovatel'skogo instituta zheleznodorozhnogo transporta Ministerstva putey soobshcheniya (for Tulupov).  
(Railroads--Train dispatching)

TULUPOV, L.P., kand.tekhn.nauk

Organization of information transmission on car flows  
on Hungarian and Polish railroads. Zhel.dor.transp.  
44 no.5:85-87 My '62. (MIRA 15:5)  
(Hungary---Railroads---Communication systems)  
(Poland---Railroads---Communication systems)

TULUPOV, L.P., kand.tekhn.nauk;

Use of calculating machines in classification yards. Vest.TSNII MFS  
21 no.4:54-58 '62. (MIRA 15:6)  
(Railroads—Hump yards) (Electronic calculating machines)

TULUPOV, L.P.

TIKHOMIROV, I.G., prof. doktor tekhn. nauk; TULUPOV, L.P.

New textbook ("Organization of train movement in railroad transport." V.V. Povorozhenko. Reviewed by I. G. Tikhomirov, L.P. Tulupov. Zhel. dor. transp. 40 no.1:95-96 Ja '58. (MIRA 11:1)

(Railroads--Management)

TULUPOV, L.P., kand.tekhn.nauk; ANTONOV, Yu.A., inzh.

Concerning the elements of a system for transmitting information  
at long distances. Avtom., telem. i sviaz' 5 no.12:12-16 D  
(MIRA 14:12)  
'61. (Railroads--Communication systems) (Railroads--Signaling)

TIKHOMIROV, I.G., prof., doktor tekhn. nauk; BUYANOV, V.A., ass.;  
VINNICHENKO, A.V., ass.; MUKHO, P.B., ass.; NEVZOROV, A.V.,  
dots.; TULUPOV, L.P., dots.; SHUL'ZHENKO, P.A., ass.;  
YARMOLENKO, V.Ye., ass.; Primal uchastiye PETROV, A.P.,  
prof.; VEREVKINA, N.M., red.; BELEN'KAYA, I.Ye., tekhn.  
red.

[Traffic organization in railroad transportation]Organiza-  
tsiia dvizheniia na zheleznodorozhnom transporte; konspekt  
lektsii. Pod obshchei red. I.G.Tikhomirova. Minsk, Izd-  
vo M-va vysshego, srednego spetsial'nogo i professional'-  
nogo obrazovaniia BSSR, 1961. 346 p. (MIRA 15:9)

1. Chlen-korrespondent Akademii nauk SSSR (for Petrov).  
(Railroads--Traffic)



TULINPOV, L.P., kand. tekhn. nauk

Use of electronic computers in the development of the daily  
plans of the operational work. Zhel. dor. transp. 47 no.5:  
33-35 My '65. (MIRA 18:6)

TULUPOV, L.P., kand.tekhn.nauk; DYKANYUK, M.I., inzh.

Use of electronic computers in the planning of the work of locomotives. Vest.TSNII MPS 24 no.3:15-18 '65.

(MIRA 18:8)

TULUPOV, L.P., kand.tekhn.nauk

Electronic computers will control the transportation processes.  
Elek. i tepl. tiaga no.6:11-13 Je '62. (MIRA 15:7)  
(Railroads--Electronic equipment)  
(Railroads--Rolling stock)

TULUPOV, L.P., kand.tekhn.nauk; LIVSHIN, G.L., inzh.-matematik

Use of electronic calculating machines for the prediction of the  
volume of car flows. Zhel.dor.transp. 43 no.11:51-54 N '61.  
(MIRA 14:11)

(Electronic calculating machines)  
(Railroads--Management)

TULUPOV, L.P., kand.tekhn.nauk

How to achieve a better organization of dispatching in the  
operation of railroads. Zhel.dor.transp. 42 no.1:37-40  
Ja '60. (MIRA 13:5)

(Railroads--Management)

TULUPOV, L.P., kand. tekhn. nauk (g. Omsk).

Experience in operating locomotives on long runs. Zhel. dor. transp.  
40 no.12:65-69 D. '58. (MIRA 12:3)

(Railroads--Locomotives)  
(Railroads--Management)

TIKHOMIROV, I.G., prof., doktor tekhn. nauk; TULUPOV, L.P., kand. tekhn. nauk;  
NEVZOROV, A.V., kand. tekhn. nauk; BUYANOV, V.A., inzh.; MUKHO, P.B.,  
inzh.; VINNICHENKO, A.V., inzh.; SHUL'ZHENKO, P.A., inzh.; YARMOLENKO,  
V.Ye., inzh. (Gomel')

"Organization of railroad traffic" by F.P. Kochnev and others.  
Reviewed by I.G. Tikhomirov and others. Zhel. dor. transp. 41  
no.4:93-96 Ap '59. (MIRA 12:6)

(Railroads--Traffic)  
(Kochnev, F.P.)

SYTSKO, P.A. (g. Orsha); TULJPOV, L.P., kand.tekhn.nauk (g. Orsha)

Experience in perfecting operational technology on railroads.  
Zhel.dor.transp. 40 no.10:65-69 0 '58. (MIRA 11:12)

1. Nachal'nik Orshanskogo otdeleniya Belorusskoy dorogi (for  
Sytsko).

(Railroads--Management)



TULUPOV, L. P.

TULUPOV, L. P. - "A calculation of the plan for making up trains, taking into account the pass-through and remaking capacities of technical stations".  
Moscow, 1955. Min Railways USSR. Moscow Order of Lenin and Order of Labor  
Red Banner Inst of Railroad Transport Engineers imeni I. V. Stalin.  
(Dissertation for the Degree of Candidate of Technical Sciences).

SO: Knizhnaya Letopis' No. 46, 12 November 1955. Moscow

TULUPOV, L.P., kand.tekhn.nauk; ANDRIANOV, V.P., inzh.; BUYANOV, V.A., inzh.

Organization of remote-controlled transmission of information to the  
computing points of railroads. Vest.TSNII MPS 20 no.3:57-61 '61.  
(MIRA 14:5)

(Railroads--Electronic equipment)

PETROV, A.P., doktor tekhn. nauk, prof.; ~~TIHUNOV, I.P.~~, kand. tekhn. nauk; KRYUKOV, N.D., kand. tekhn. nauk; GUNDOBIN, V.N., inzh.; VASIL'YEV, G.S., kand. tekhn. nauk; GRISHIN, M.S., kand. tekhn. nauk; MOROZOVA, K.N., inzh.; ROZE, V.A., inzh.; LEVSHIN, G.L., inzh.; BERNGARD, K.A., doktor tekhn. nauk, prof.; BIKCHENTAY, M.A., inzh.; BUYANOV, V.A., inzh.; ILOVAYSKIY, N.D., inzh.; MUKHAMEDOV, G.A., kand. tekhn. nauk; MIROSHNICHENKO, A.P., inzh.; ANDRIANOV, V.P., inzh.; BUTS, V.D., inzh.; KAZIMOV, A.A., inzh.; KIREYEV, O.P., inzh.; DYUFUR, S.L., kand. tekhn. nauk; USTINSKIY, A.A., kand. tekhn. nauk; MIKHAYLOV, S.M., inzh.; NESTEROV, Ye.P., kand. tekhn. nauk, retsenzent; LIVSHITS, V.N., inzh., retsenzent; PREDE, V.Yu., inzh., red.; VOROTNIKOVA, L.F., tekhn. red.

[Control of transportation processes using electronic digital computers] Upravlenie perevozochnym protsessom s primeneniem elektronnykh tsifrovyykh vychislitel'nykh mashin. Pod obshchei red. A.P.Petrova. Moskva, Transzheldorizdat, 1963. 207 p. (MIRA 16:8)

1. Chlen-korrespondent AN SSSR (for Petrov).  
(Railroads--Management) (Electronic digital computers)

TULUPOV, L.P., kand.tekhn.nauk

New system for marking freight cars. Vest.TSNII MPS 22  
no.5:57-60 '63. (MIRA 16:8)  
(Railroads--Freight cars)

2.

TULUPOV, N.

Creativeness is the club's work spirit. Sov. profsoinzy  
19 no.21:26-28 N '63. (MIRA 17:1)

1. Zaveduyushchiy sektorom kul'turno-massovogo otdela  
Vsesoyuznogo tsentral'nogo soveta professional'nykh soyuzov.

TULUPOV, P.I., mashinist

Some methods for working on the TE3 diesel locomotive. Elek.  
i tepl. tiaga no.6:37-38 Je '62. (MIRA 15:7)

1. Depo L'vov-Zapadnyy.  
(Diesel locomotives--Maintenance and repair)

POLJANSKIJ, N.G. [Polyanskiy, N.G.]; TULUPOV, P.Jo. [Tulupov, P.E.]

Methods of determining the thermal resistance of strongly acid cation exchange resins in organic liquids. Chem prum 13 no.10: 550-553 0 '63.

1. Novokujbysevska pobočka vedecko-vyzkumneho ustavu syntetickych alkoholů a organickych latek, Novokujbysevska.

POLYANSKIY, H.G.; TOLINPOV, P.Ye.

Thermal stability and catalytic activity of the KU-1 sulfo-phenolformaldehyde cation exchanger in hydrocarbons. Zhur. prikl. khim. 37 no.12:2686-2692 D '64.

(MIRA 18:3)



POLYANSKIY, N.G.; TULUPOV, P.Ye.; SADOVSKAYA, G.K.; SLOVOKHOTOVA, N.A.

Mechanism of thermal desulfuration of the hydrogen form of ion exchanger KU-2 in hydrocarbon media. Zhur. prikl. khim. 38 no.4: 910-918 Ap '65. (MIRA 18:6)

1. Novokuybyshevskiy filial nauchno-issledovatel'skogo instituta sinteticheskikh spirtov i organicheskikh produktov i Nauchno-issledovatel'skiy fiziko-khimicheskii institut imeni Karpova, Moskva.

POLYANSKIY, N.G.; TULUPOV, P.Ye.

Thermal desulfurization of the hydrogen form of the KU-2 resin  
in some hydrocarbon media. Zhur.prikl.khim. 35 no.10:2281-2287  
O '62. (MIRA 15:12)

(Ion exchange resins) (Desulfuration)

POLYANSKIY, N.G.; TULUPOV, P.Ye.; FEDOROV, Ye.F.

Ion exchange resins as catalysts for polymerization of unsaturated hydrocarbons. *Kin.i kat.* 3 no.1:162 '62. (MIRA 15:3)

1. Nauchno-issledovatel'skiy institut sinteticheskikh spirtov i organicheskikh produktov, Novokuybyshevskiy filial.  
(Ion exchange resins) (Polymerization) (Olefins)

POLYANSKIY, N.G.; TULUPOV, P.Ye.

Effect of the moisture content of the cation exchanger KU-2  
on its stability and catalytic activity in the presence of  
hydrocarbons. Zhur. prikl. khim. 36 no.10:2244-2251 0 '63.  
(MIRA 17:1)

1. Novokuybyshevskiy filial Nauchno-issledovatel'skogo insti-  
tuta sinteticheskikh spirtov i organicheskikh produktov.

TULUPOV, P. Ya.; Prinimala uchastiye STREL'NIKOVA, N. I.

Chromatographic determination of impurities of  $C_4$  hydrocarbons  
in the methane-hydrogen fraction. Zav. lab. 28 no.12:1430-1431  
'62. (MIRA 16:1)

1. Novokurybyshevskiy filial nauchno-issledovatel'skogo instituta  
sinteticheskikh spirtov i organicheskikh produktov.

(Hydrocarbons) (Chromatographic analysis)

TULUPOV, P.Ye.

Heat resistance of various sulfonated cationites in a  
medium of tertiary amylenes. Zhur.fiz.khim. 39  
no.11:2708-2713 N '65. (MIRA 18:12)

1. Nauchno-issledovatel'skiy institut sinteticheskikh  
spirtov i organicheskikh produktov, Novokuybyshevskiy  
filial.

NIKOLAYEV, Lev Aleksandrovich; TULUPOV, Vladimir Alekseyevich;  
Prinimal uchastiye LUNIN, M.A., dots.; ALAVERDOV, Ya.G.,  
red.; STUKOVNIN, N.D., red.

[Physical chemistry] Fizicheskaya khimiya. Moskva, Vys-  
shaya shkola, 1964. 440 p. (MIRA 17:9)

TULUPOV V. A.  
USSR/Chemistry - Plastics

FD-1206

Card 1/1      Pub. 129-9/19

Author      : Shuykin, M. I.; Tulupov, V. A.

Title      : The behavior of the geometric isomers of piperylene to ultraviolet illumination

Periodical   : Vest. Mosk. un., Ser. fizikomat. i yest. nauk, 9, No. 5., 91-95, Aug 1954

Abstract    : Established the fact that the cis- and trans-isomers of piperylene can be converted from one to the other under the action of ultraviolet light. Also established the approximate composition of the equilibrium mixture. Demonstrated the effect of powdered silver in this conversion. Fifteen references (two USSR).

Institution   : Chair of Petroleum Chemistry

Submitted    : March 25, 1954



U.S.S.R.

Characteristic test for cyclopentadiene. N. I. Shufkin  
and V. A. Tulupov (Moscow State Univ.). *Zhur. Ob-*  
*shch. Khim.* 1964, 40, 10, 1700-1701. (Chem. Abstr. 60:10000) (1964)  
pentamethylcyclopentadiene is added to a solution of Fe atom in

cal/mole. The reaction mechanism is proposed and it is suggested that the cyclization is initiated by a metal-organic complex of the radical type, the odd electron being located at either the 3- or 6-position of the C-chain.

*Tubulose V A*

Synthesis of primary alcohols. N. I. Shulkin and V. A. Tulyakov. Vestnik Mosk. Univ. 10, No. 12, Ser. Khim. Mat. Estestv. Nauk No. 8, 93-4 (1965) — The mono-meric  $(CH_3)_2$  necessary for good yields of primary alcs. in the reaction with  $RMgX$  (cf. Ziegler, C.A. 15, 3880) is conveniently generated in a glass vessel with a wide sidearm which leads into the reaction flask, the vessel and the side arm are wound with an electric heater wire. Alcohols are obtained by the use of but 1.3 moles paraffin aldehyde per mole of  $RMgX$ .

*chem 2*

*PM*

TULUPOV, V. A.

SHUYKIN, N. I.; TULUPOV, V. A.; BEL'SKIY, I. F.

On the hydration of the furan ring. Zhur.ob.khim.25 no.6:1175-  
1178 Je'55. (MIRA 8:12)

1. Moskovskiy Gosudarstvennyy universitet  
(Furan) (Hydration)



*Tulupov, V. A.*

USSR/ Chemistry - Hydrocarbon conversion

Card 1/1 Pub. 22 - 32/60

Authors : Shuykin, N. I., Memb. Corresp. of Acad. of Sc., USSR.; and Tulupov, V. A.

Title : The kinetics of piperylene conversion into cyclopentadiene

Periodical : Dok. AN SSSR 100/4, 731-733. Feb 1, 1955

Abstract : The kinetics of  $C_5H_8$  conversion into  $C_5H_6$  was investigated to determine the nature of the  $C_5H_8$  cyclization process. It was established that the yield of  $C_5H_6$  at temperatures of  $600^\circ$  and pressures of 30 mm depends upon the presence and nature of the catalyst and that the cyclization process is quite complicated leading to the formation of pentenes, pentanes and gases (in addition to  $C_5H_6$ ), which are formed as result of cracking of the basic  $C_5H_8$  and probably also as result of secondary conversion of the pentanes and pentenes. The conversion reaction was found to be catalytic and the activation energy was estimated at 59105 cal/mol. Three references: 2 USSR and 1 English (1948 and 1950). Table.

Institution : The M. V. Lomonosov State University, Moscow

Submitted : September 3, 1954

Name: TULUPOV, V. A.

Dissertation: Study of methods for a catalytic synthesis of cyclopentadiene

Degree: Cand Chem Sci

*Defended at*  
Affiliation: Min Higher Education USSR, Moscow Inst of Fine Chemical  
Technology imeni M. V. Lomonosov

*Publication*  
Defense Date, Place: 1956, Moscow

Source: Knizhnaya Letopis', No 51, 1956

SHUYKIN, N.I.; TULUPOV, V.A.

Possible formation of cyclopentadiene from heterocyclic compounds  
with five carbon atoms in a molecule. Izv.AN SSSR Otd.khim.nauk  
no.2:213-219 F '56. (MIRA 9:7)

1.Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova.  
(Cyclopentadiene)



TULUPOV, V. A.

USSR/ Physical Chemistry - Kinetics. Combustion. Explosives. Topochemistry.  
Catalysis

B-9

Abs Jour : Referat Zhur - Khimiya, No 4, 1957, 11293

Author : Shuykin N.I., Tulupov V.A.

Inst : Moscow University

Title : On Catalytic Hydrogenation of Pyridine

Orig Pub : Vestn. Mosk. un-ta, 1956, No 3, 73-79

Abstract : A study was made of hydrogenation of pyridine under flow conditions at space velocity  $0.1 \text{ hour}^{-1}$  on skeleton Ni-catalyst (prepared from an alloy 73% Al + 27% Ni), having an excess  $\text{H}_2$ . It is shown that besides piperidine there are formed 1-aminopentane, pyrrole, alpha-, beta- and gamma-picoline and alpha-aminopyridine. There is proposed a mechanism of formation of the reaction by-products over the groups  $\text{CH}_2$ ,  $\text{CH}_3$ ,  $\text{NH}_2$ ,  $\text{C}_5\text{H}_4\text{N}^+$  and H atoms.

1/1

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The above is the only one of the  
very many which is the active catalyst of the reaction, that  
H<sub>2</sub>O forms but not the other one.

**"APPROVED FOR RELEASE: 03/14/2001**

**CIA-RDP86-00513R001757420003-2**

**APPROVED FOR RELEASE: 03/14/2001**

**CIA-RDP86-00513R001757420003-2"**

76-32-3-41/43

AUTHOR: Tulupov, V. A.

TITLE: The Kinetics of Hydration of Cyclopentene With the  $Mn^{+2}$  Ion as a Catalyst (Kinetika gidratirovaniya tsiklopentena s ionom  $Mn^{+2}$  v kachestve katalizatora)

PERIODICAL: Zhurnal Fizicheskoy Khimii, 1958, Vol. 32, Nr 3, 15727-729 (USSR)

ABSTRACT: In connection with a paper that investigated catalytic reactions with unsaturated compounds, the reaction mentioned in the title is studied in the paper under review. Manganese stearate, dissolved in paraffin oil, is used as a catalyst. Data of the preparation of the initial substances are given and from a drawing, it is seen that the arrangement used possesses a reaction vessel, which is located in a thermostat, and which is shaken during the experiment. The hydrogen is led through the usual purifying vessels and measured with mercury in a buret at fixed temperature. The experiments were performed at 25, 30, 36, 38 and 39°C. In the investigations during the reaction, the formation of a manganese complex was

Card 1/2

76-32-3-41/43

The Kinetics of Hydration of Cyclopentene With the  $Mn^{+2}$  Ion as a Catalyst

observed which decomposed in the distillation of the reaction product. The obtained results are graphically represented from which it is to be seen that the nature of the reaction process does not change with a modification of concentration of the catalyst. Furthermore, the reaction does not take place at the surface of the vessel, but homogeneously in the interior. The shape of the isotherms indicates that the depth of transformation does not change with temperature. Finally it is stated that the performed reactions take place with an activation energy of the order of magnitude of the energy of heterogeneous catalytic hydrogenations of unsaturated compounds. The value of the activation energy changes with the concentration of catalyst, values for this being given. The author thanks Professor L. A. Nikolayev. There are 5 figures and 4 tables, 3 of which are Soviet.

ASSOCIATION: Vsesoyuznyy nauchnyy mashinostroitel'nyy institut, Moskva  
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(Chemical reaction, Rate of)

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B101/B186

AUTHOR: Tulupov, V. A. (Moscow)

TITLE: A new equation of state for gases

PERIODICAL: Zhurnal fizicheskoy khimii, v. 37, no. 2, 1963, 284-289

TEXT: An equation of state is derived for gases based on the assumption that a change of the state of aggregation is accompanied by a change of composition in molecular complexes which contain more particles in liquid and solid state than in gaseous state. The transition gas - liquid - solid is thus connected with a reduction in the number of single particles and in the number of complexes made up of few particles; also with an increase in the number of complexes comprising many particles.  $\sum \overline{X_i} X_i x_i(T) = RT$  ✓

is written, where  $X_i$  are the generalized forces acting upon the coordinates  $x_i$ . In the case of a gas, the forces acting in the system are the pressure  $p$  and the interaction forces  $X_{ij}$  between single particles,  $X_{ij}$  between individual particles and complexes of  $j$  particles,  $X_{ii}$  between complexes

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A new equation of state ...

with equal and  $X_{ij}$  between those with unequal number of particles. A matrix is set up for the total of these forces and, since  $X_{ij} = X_{ji}$ , the sum of the forces is set equal to the total of the diagonal elements. For the internal forces  $X_{11} = a_{11}^0 e^{\lambda/RT}/v^2$ , ...,  $X_{jj} = a_{jj}^0 e^{\lambda/RT}/v^{2j}$  hold, where  $a_{11}^0$ , ...,  $a_{jj}^0$  are coefficients of proportionality. The final result obtained is:  $(p + \sum_{jj} a_{jj}/v^{2j} + \sum_{ij} a_{ij}/v^{1+j})(v - v_0) = RT$ , where

$a_{jj} = a_{jj}^0 e^{\lambda/RT}$ ,  $a_{ij} = a_{ij}^0 e^{\lambda/RT}$ . The difference between this equation and the equation of Van der Waals (for which  $j = 1$ ) is that with  $j = 1$  only two metastable regions exist on the  $p, v$  curve, whereas the equation suggested allows for a variety of metastable states. It is proved that transition from one stable state into another can take place either by passing through one metastable state any number of times, or by passing through a plurality of metastable states. With a multiplicity  $j$  of the complexes, the

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